

What is claimed is:

1. A radio communication apparatus for radio-communicating with another radio communication apparatus, comprising:
  - 5 frame setting means for setting a frame period and a slot as predetermined time units;
  - receiving slot setting means for setting at least one receiving slot among receiving slots received during said frame period;
  - notification means for notifying information of said receiving slot
  - 10 via a beacon signal; and
  - slot increasing means for increasing receiving slots, if receiving a signal from another radio communication apparatus at said receiving slot.
- 15 2. A radio communication apparatus for radio-communicating with another radio communication apparatus, comprising:
  - receiving means for receiving a beacon signal from another radio communication apparatus;
  - receiving slot detection means for detecting a receiving slot of said other radio communication apparatus from said received beacon signal;
  - 20 and
  - slot increasing means for increasing receiving slots at a timing that does not coincide with the receiving slots detected by said receiving slot detection means.
- 25 3. A radio communication apparatus for radio-communicating with another radio communication apparatus, comprising:
  - frame setting means for setting a frame period and a slot as predetermined time units;
  - 30 receiving slot setting means for setting a plurality of receiving slots received during said frame period;

notification means for notifying information of said receiving slot set by said setting means via a beacon signal; and

slot decreasing means for decreasing said plurality of receiving slots to a minimum of one, if there is no signal reception from another 5 radio communication apparatus at said receiving slot set by said setting means.

4. A radio communication apparatus for radio-communicating with another radio communication apparatus, comprising:

10 receiving means for receiving a beacon signal from another radio communication apparatus;

receiving slot detection means for detecting a receiving slot of said other radio communication apparatus from said received beacon signal; and

15 transmitting means for transmitting information via a new receiving slot if a change occurs at said receiving slot, after information is transmitted against a receiving slot of said other radio communication apparatus.

20 5. A radio communication apparatus for radio-communicating with another radio communication apparatus, comprising:

frame setting means for setting a frame period and a slot as predetermined time units;

25 receiving slot setting means for setting at least one receiving slot among receiving slots received during said frame period; and

notification means for notifying information of said receiving slot set by said setting means via a beacon signal; wherein

30 said notification means notifies a reception acknowledgement if receiving a signal from another radio communication apparatus at said receiving slot set by said setting means via a beacon.

6. A radio communication method for performing radio communication between a plurality of radio communication apparatuses, the method comprising the steps of:

5 setting a frame period of predetermined time through a radio communication apparatus;

preparing a slot of predetermined time unit during the frame period set in said setting step;

setting at least one receiving slot through each of said radio communication apparatuses; and

10 increasing one's own receiving slots, if there is reception at said receiving slot set in said setting step.

7. A radio communication method for performing radio communication between a plurality of radio communication apparatuses,

15 the method comprising the steps of:

setting a frame period of predetermined time through a radio communication apparatus;

collecting a beacon from another adjacent radio communication apparatus through a receiving operation performed throughout said frame period set in said setting step;

storing receiving slot information of said other adjacent radio communication apparatus from said beacon; and

increasing one's own receiving slots at a timing that does not coincide with said receiving slots stored by said storing step.

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8. A radio communication method for performing radio communication between a plurality of radio communication apparatuses, the method comprising the steps of:

30 setting a frame period of predetermined time through a radio communication apparatus;

preparing a slot of predetermined time unit during the frame

period set in said setting step;

setting a plurality of receiving slots for data reception through each of said radio communication apparatuses; and

5 decreasing one's own receiving slots to a minimum of one, if there is no reception by said receiving slots set in said setting step.

9. A radio communication method for performing radio communication between a plurality of radio communication apparatuses, the method comprising the steps of:

10 setting a frame period of predetermined time through a radio communication apparatus;

collecting a beacon from another adjacent radio communication apparatus through a receiving operation performed throughout said frame period set in said setting step;

15 storing receiving slot information of said other adjacent radio communication apparatus from said beacon;

receiving a beacon signal from a radio communication apparatus if information is transmitted by a receiving slot of said radio communication apparatus; and

20 transmitting information via another receiving slot, if a change occurs in an allocation of a receiving slot.

10. A radio communication method for performing radio communication between a plurality of radio communication apparatuses, 25 the method comprising the steps of:

setting a frame period of predetermined time through a radio communication apparatus;

preparing a slot of predetermined time unit during the frame period set in said setting step;

30 setting at least one receiving slot through each of said radio communication apparatuses;

notifying a position of said receiving slot set in said setting step via a beacon; and

notifying reception acknowledgement, if receiving a signal from another radio communication apparatus.

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11. A computer-readable program for executing a process of radio communication with another radio communication apparatus on a computer system, the program comprising the step of:

increasing receiving slots, if there is reception in at least one 10 receiving slot set by one's own radio communication apparatus.

12. A computer-readable program for executing a process of radio communication with another radio communication apparatus on a computer system, the program comprising the step of:

15 decreasing receiving slots to a minimum of one, if there is no reception at any receiving slot set by one's own radio communication apparatus.

13. A computer-readable program for executing a process of radio 20 communication with another radio communication apparatus on a computer system, the program comprising the step of:

transmitting information via another receiving slot, if a change occurs in an allocation of a receiving slot of a receiving radio communication apparatus.

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14. A computer-readable program for executing a process of radio communication with another radio communication apparatus on a computer system, the program comprising the step of:

notifying reception acknowledgement, if a signal from another 30 radio communication apparatus is received at a receiving slot set by one's own radio communication apparatus.